



EFFECT OF CURIOSITY ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS OF TUMKUR DISTRICT

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According to Good (1945) "Academic Achievement is the knowledge attained or skill developed in the school subjects usually assessed by test scores or marks assigned by teachers or by both."

Achievement in the higher secondary level, decides the academic career in one's life. This necessitates their improvement in studies and acquisition of higher scores in the subjects they have chosen for study. Academic achievement also allows students to enter competitive fields. Academic achievement also helps shape the minds of students. Knowledge about social science helps people to know the contributions of historians to the progress or decline of their entity, the religious reforms in the society, revolutions a cause for the upliftment of the generation, the duties and responsibilities of the citizen etc.. Above all the objectives of teaching and learning social science is to facilitate the learners growth into a well informed and responsible citizen, develop and appreciation of the cultural heritage of India and various cultures of the world, enable the students to see the present in the perspective of past developments, promote an understanding of contemporary India, promote economic literacy among the learners, develop social skill and civic competencies etc..

To know the accomplishment of the above mentioned set objectives, the achievement of the students is assessed. This will help the teacher to know the effectiveness of his teaching, even to know the difficulties of the learners in learning social science. In order to do so teacher should know the factors affecting the academic achievement of the learners in social science. In order to make the learning environment optimally effective, it should capitalize not only on contextual but also the learners' characteristics which comes in the way of his academic achievement. There are certain factors which effect the student's academic achievement, such as curiosity, social maturity, environmental awareness, types of school, Gender, etc....

Researcher knew that a hungry mind can grab the information and digest. Thus in learning, curiosity plays an important role to make the students mind to be eager to learn and acquire knowledge for its better applicability. Hence researcher felt the need to study the effect of Curiosity upon the Academic Achievement of secondary school students.

We all know that all the above factors will have its affect upon Academic Achievement of the students, but how about their effect in the presence of other. Hence the researchers wish to study the combined effect of these variables upon the Academic Achievement.

STATEMENT OF THE PROBLEM:

"Effect of Curiosity on Academic Achievement in Social Science of IX Standard Students of Tumkur Educational District- South."

OBJECTIVES OF THE STUDY:

The present study was undertaken with the following objectives:-

1. To study the relationship between Curiosity and Academic Achievement of IX standard students in social science.
2. To study the main effect of Curiosity on Academic Achievement of IX standard students in social science.
3. To study the main effect of types of school on Academic Achievement of IX standard students in social science
4. To study the main effect of gender on Academic Achievement of IX standard students in Social Science
5. To find out the interaction effect of Curiosity and moderator variables on Academic Achievement of IX standard students in social science.

SCOPE OF THE STUDY:

The scope of this research is to study the impact of major variables ie., Curiosity, on the Academic Achievement of IX standard students. Even researcher has

assessed the influence of other variables, such as types of schools, and gender on the Academic Achievement of IX standard students. For this researcher has collected the data by administering the following tools on the sample (600 IX standard students) selected from the population of Tumkur Educational District:

1. The self prepared validated achievement test in social science
2. Children's curiosity scale by Rajiv Kumar

REVIEW OF RELATED LITERATURE:

The reviews show that the Academic Achievement was related with many factors of the research undertaken by many researchers. The collected research reviews such as the studies conducted by Hoyan & Greenberger (1969), Vidler & Ranvar(1947,75), Shmidheiser (1978), Todd Barrett, Kashdan & Mantak, Yuen (2007), Rick, Nauert (2011) tells that their exists positive relationship between Academic Achievement and Curiosity.

The studies conducted by Kenneth (1963), Samal.N. (1990) Mulia (1991), Venugopal (1994) reveal that there exist no significant difference in the academic achievement of boys and girls but the studies conducted by Nagaraju.M.T.V. & Sumalatha.K. & Syed Noor-Ul-Amin and Syed Khushnooda Nazir (2013) reveal that there exist significant difference in the academic achievement of boys and girls.

But there was mixed opinion about the influence of gender as well as types of school on the Academic Achievement. As the reviews revealed varied results, the researcher felt that there is a need to investigate the influence of Curiosity, on the Academic Achievement and also considered the effect of some of the Moderator Variables such as gender and types of school on Academic Achievement in social science of 9th standard students of Tumkur Educational District- South. Even it was also understood from the reviews that there were not many studies which have attempted to examine the effect of these variables on the academic achievement of secondary school students in social science. Hence it was a deemed desire of the researcher to carry out the research work with academic achievement in social science as dependent variable of the study.

VARIABLES OF THE STUDY:

Academic Achievement is Social Science is the Dependent Variable, Curiosity is the Independent Variable and Types of School & Gender are the Moderator Variables

CONCEPTUAL DEFINITIONS OF VARIABLES:

Dependent Variable:

Academic Achievement:

Good, "Academic Achievement is the knowledge attained or skills developed in the school subjects usually assessed by test scores or by marks assigned by teachers or by both".

Independent Variables:

Curiosity:

Raj defines, "Curiosity as the level of social skills and awareness that an individual has achieved relative to particular norms related to an age group. It is a measure of the development competence of an individual with regard to interpersonal relations, behavior, appropriateness, social problem solving and Judgment".

Moderator Variables:

Types of School: Types of school refers to the type of controlling authority of all the aspects of the school. This decides the norms for the school and facilities of the academic achievement. There are three different types of school, viz.

- a. Government schools
- b. Aided schools
- c. Un-aided schools

Gender: Gender is the division of people into two categories, “boys” and “girls” or ‘men’ and ‘women’ or in general ‘male and female’. Through interaction with caretakers, socialization in childhood, Peer pressure in adolescence and gendered work and family roles women and men are socially constructed to be different in behavior, attitudes and emotions.

HYPOTHESES OF THE STUDY:

1. There is no significant relationship between Curiosity and Academic Achievement in social science of IX standard students of Tumkur Educational District – South.
2. There is no significant difference in the Academic Achievement in social science of IX standard students of Tumkur Educational District – South with different levels of Curiosity.
3. There is no significant difference in the Academic Achievement in social science of IX standard students of different types of schools of Tumkur Educational District-south.
4. There is no significant difference in the Academic Achievement of Boys and Girls in social science of IX standard students of Tumkur Educational District – South.
5. There is no significant main and interaction effect of Curiosity and types of school on Academic Achievement in social science of IX standard students of Tumkur Educational District – South
6. There is no significant main and interaction effect of Curiosity and Gender on Academic Achievement in social science of IX standard students of Tumkur Educational District – South
7. There is no significant main and interaction effect of Types of school and Gender on Academic Achievement in social science of IX standard students of Tumkur Educational District – South.

POPULATION AND SAMPLE OF THE STUDY:

The IX standard students enrolled in different secondary schools of Tumkur Educational District South during the academic year 2015-16 constitutes the population of the study. Six hundred students from the entire population of IX standard students of 460 Secondary schools of Tumkur Educational District – South were selected as the sample.

The researcher has adopted Random Stratified Proportionate sampling technique to draw a sample of 600 students from 7939 student population of IX standard students of Tumkur Educational District – South.

STATISTICAL ANALYSIS:

The major analysis placed in as follows and categorized into three section to test the hypothesis formulated earlier.

- a) Correlation
- b) t-test
- c) Two-way analysis of variance (ANOVA)

CORRELATION:

Hypothesis 1.0: There is no significant relationship between Curiosity and Academic Achievement in Social Science of IX standard students.

Table 1: Showing the relationship between Curiosity and Academic Achievement in Social Science of IX standard students.

Variables	N	df	Pearson's Correlation-r
Curiosity	600	598	.189 (S**)
Academic Achievement	600		

**Significant at 0.01 level

The data obtained in relation to Curiosity and Academic Achievement in Social Science of IX standard students is given in the table 1.

The obtained value of r .189 was more than the critical value of r .088 at .05 and .115 at .01 levels of significance. Hence the null hypothesis was rejected and the alternative hypothesis was accepted. The positive correlation between Curiosity and Academic Achievement implies that their exist positive relationship between Curiosity and Academic Achievement i.e., as the curiosity increases the Academic Achievement in social science also increases and as the curiosity decreases the Academic Achievement in social science also decreases.

t-Test:

Hypothesis 2: There is no significant difference in the Academic Achievement in Social Science of IX standard students of Tumkur Educational District – South with different levels of Curiosity.

Table 2: Number, Mean, Standard deviation, df and t-value of Academic Achievement in Social Science of IX standard students with different levels of Curiosity.

Curiosity	Number	Mean	Standard deviation	df	t- value
High	173	22.15	6.922	448	-2.644 (S**)
Moderate	277	20.39	6.837		
Low	150	18.67	6.928	321	-4.500 (S**)
High	173	22.15	6.922		
Low	150	18.67	6.928	425	-2.465 (S*)
Moderate	277	20.39	6.837		

In the above table, the obtained t-value was more than the critical value 1.97 at 0.05 level of significance for df 448, 321 & 425. It means that the obtained t-value was found to be significant. Therefore, null hypothesis was rejected and the alternative hypothesis was accepted. It implies that there exists significant difference in the Academic Achievement in social science of IX standard students with different levels of Curiosity.

Hypothesis 3: There is no significant difference in the Academic Achievement in social science of IX standard students of different types of schools of Tumkur Educational District-south.

Table 3: Number, Mean, Standard deviation, df and t-value of Academic Achievement in social science of IX standard students studying in different types of Schools.

Types of School	Number	Mean	Standard deviation	df	t- value
Government	195	19.65	6.571	400	-1.371 (NS)
Aided	207	20.60	7.248		
Government	195	19.65	6.571	391	-2.156 (S*)
Unaided	198	21.14	7.070		
Aided	207	20.60	7.248	403	-.755 (NS)
Unaided	198	21.14	7.070		

In the above table, the obtained t-value is not significant for the Academic Achievement in social science of IX standard students of Government and Aided Schools & Aided and Unaided Schools at 0.05 level of significance for df 400 & 403. Therefore, null hypothesis was accepted. It implies that there exists no significant difference in the Academic Achievement in social science of IX standard students of Government and Aided Schools & Aided and Unaided Schools. But t-value is significant for the Academic Achievement in social science of IX standard students of Government and Unaided Schools at 0.05 level of significance for df 391. Therefore, null hypothesis was rejected and alternate hypothesis was accepted. It implies that there exists significant difference in the Academic Achievement in social science of IX standard students of Government and Unaided Schools.

Hypothesis 4.0: There is no significant difference in the Academic Achievement of Boys and Girls in social science of IX standard students of Tumkur Educational District-South.

Table 4: Number, Mean, Standard deviation, df and t-value of Academic Achievement of Boys and Girls in social science of IX standard students.

Gender	Number	Mean	Standard deviation	df	t- value
Boys	319	20.48	6.926	598	-.054 (NS)
Girls	281	20.45	7.074		

In the above table, the obtained t-value -.054 was less than the critical value 1.97 at 0.05 level of significance for df 598. It means that the obtained t-value was found to be not significant. Therefore, null hypothesis was accepted. It implies that there exists no significant difference in the Academic Achievement of Boys and Girls in social science of IX standard student.

ANOVA:

Hypothesis 5: There is no significant main and interaction effect of Curiosity and types of school on Academic Achievement in social science of IX standard students of Tumkur Educational District – South.

Table 5: Represents the summary of ANOVA of academic achievement in social science of IX standard students with Curiosity and types of school.

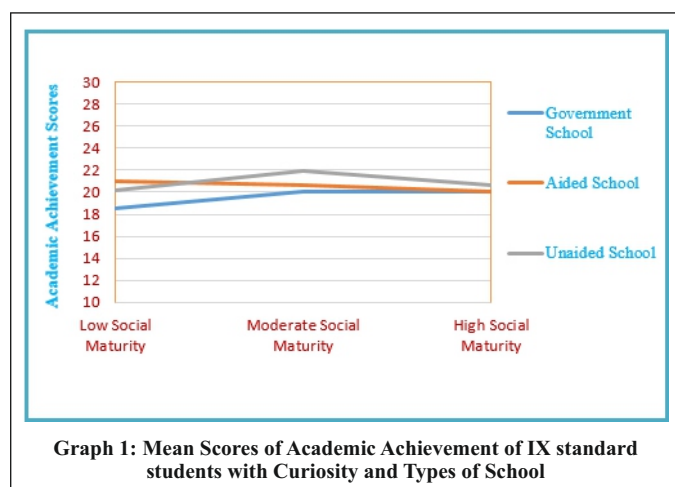
Source of variance	Sum of squares	df	Mean sum of squares	F-value
Curiosity	919.498	2	459.749	9.701 (S**)
Types of School	224.425	2	112.213	2.368 (NS)
Curiosity And Types of School.	97.923	4	24.481	.517 (NS)
Error	28008.760	591	47.392	

Analysis of variance of Academic Achievement in social science of IX standard students with curiosity and types of school is indicated in the table 5. The obtained F-value 9.701 for the main effect of curiosity on academic achievement in social science was more than the critical values 3.01 at 0.05 level of significance and 4.65 at 0.01 level for the df 2/591. Hence the null hypothesis was rejected and the alternative hypothesis was accepted. This means that there exists significant main effect of curiosity on academic achievement of IX standard students in social science.

The obtained F-value 2.368 for the main effect of types of school on academic achievement in social science was less than the critical value 3.01 at 0.05 level of significance for the df 2/591. Hence the null hypothesis was accepted. This indicates that types of school have no significant main effect on the academic achievement of IX standard students in social science.

The obtained F-value .517 for the interaction effect of curiosity and types of school was less than the critical value 2.39 at 0.05 level of significance for the df 4/591. Hence the null hypothesis was accepted. This indicates that there exists no significant interaction effect of curiosity and types of school on the academic achievement of IX standard students in social science.

ANOVA – TYPES OF SCHOOL AND CURIOSITY:



Hypothesis 6: There is no significant main and interaction effect of Curiosity and Gender on Academic Achievement in social science of IX standard students of Tumkur Educational District – South

Table 6: Represents the summary of ANOVA of academic achievement in social science of IX standard students with curiosity and gender.

Source of variance	Sum of squares	df	Mean sum of squares	F-value
Curiosity	954.219	2	477.109	10.108 (S**)
Gender	13.445	1	13.445	.286 (NS)
Curiosity And Gender.	254.406	2	127.203	2.695 (NS)
Error	28038.370	594	47.203	

S** - significant at 0.01 level

NS - Not significant

Analysis of variance of Academic Achievement in social science of IX standard students with curiosity and gender is indicated in the table 6.

The obtained F-value 10.108 for the main effect of curiosity on academic achievement in social science was more than the critical values 3.01 at 0.05 level of significance and 4.65 at 0.01 level for the df 2/594. Hence the null hypothesis was rejected and the alternative hypothesis was accepted. This means that there exists significant main effect of curiosity on academic achievement of IX standard students in social science.

The obtained F-value .289 for the main effect of gender on academic achievement in social science was less than the critical value 3.86 at 0.05 level of significance for the df 1/594. Hence the null hypothesis was accepted. This indicates that gender has no significant main effect on the academic achievement of IX standard students in social science.

The obtained F-value 2.695 for the interaction effect of curiosity and gender was less than the critical value 3.01 at 0.05 level of significance for the df 2/594. Hence the null hypothesis was accepted. This indicates that there exists no significant interaction effect of curiosity and gender on the academic achievement of IX standard students in social science.

Hypothesis 7: There is no significant main and interaction effect of Types of school and Gender on Academic Achievement in social science of IX standard students of Tumkur Educational District – South

Table 7: Represents the summary of ANOVA of academic achievement in social science of IX standard students with type of school and gender.

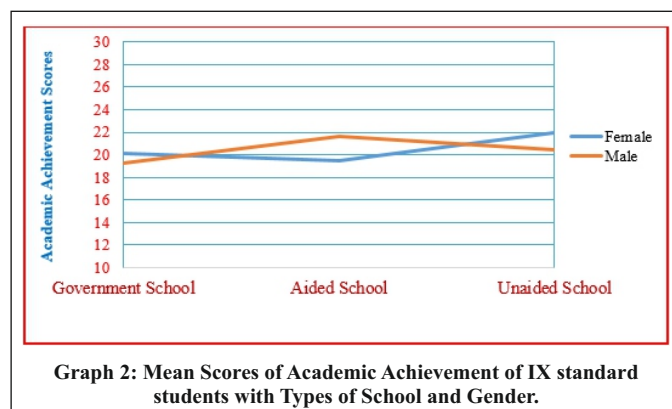
Source of variance	Sum of squares	df	Mean sum of squares	F-value
Type of school	235.921	2	117.906	2.444 (NS)
Gender	.377	1	.377	.008 (NS)
Type of school And Gender.	373.842	2	186.921	3.873 (S*)
Error	28671.461	594	48.268	

Analysis of variance of Academic Achievement in social science of IX standard students with type of school and gender is indicated in the table 7.

The obtained F-value 2.444 for the main effect of type of school and gender on academic achievement in social science was less than the critical value 3.01 at 0.05 level of significance for the df 2/594 & 1/594 respectively. Hence the null hypothesis was accepted. This indicates that type of school and gender does not have significant main effect on the academic achievement of IX standard students in social science.

The obtained F-value 3.873 for the interaction effect of type of school and gender on academic achievement in social science was more than the Critical values 3.01 at 0.05 level of significance for the df 2/594. Hence the null hypothesis was rejected and the alternative hypothesis was accepted. This means that there exists significant interaction effect of type of school and gender on academic achievement of IX standard students in social science.

ANOVA – TYPES OF SCHOOL AND GENDER:



FINDINGS & CONCLUSION OF THE STUDY:

Following were the findings and conclusions of the study:

The analysis of data by adopting the Pearson's product moment correlation reveals that, There exist significant positive correlation between Curiosity and Academic Achievement in social science of IX standard students of Tumkur Educational District – South. And the t-test reveals that there was significant difference in the academic achievement in social science of IX standard students with different levels of Curiosity. Hence it can be concluded that Curiosity has significant effect on the Academic Achievement in Social science of IX standard students of Tumkur Educational District- south. Even the t-test reveals that there was no significant difference in the academic achievement in social science of IX standard students studying in government and aided schools, aided and unaided schools. But there exist significant difference in the academic achievement of IX standard students studying in government and unaided schools. Hence by observing the mean value it can be concluded that the students studying in unaided schools are better in Academic Achievement in Social science than the students studying in government schools. It was also found from the t-test that there was no significant difference in the Academic Achievement in Social science of boys and girls studying in IX standard of Tumkur educational district-south. Hence the gender do not have any effect on the Academic Achievement in Social science of IX standard students of Tumkur Educational District- south.

The findings and conclusions drawn on the basis of analysis of data by the statistical technique two-way ANOVA is as follows:

ANOVA for Curiosity and types of school reveals that there was significant main effect of curiosity upon academic achievement in Social science of IX standard students of Tumkur Educational District- south. But there was no main effect of types of school and no interaction effect of Curiosity and types of school upon academic achievement in Social science of IX standard students of Tumkur Edu-

cational District- south.

ANOVA for Curiosity and types of school reveals that there was significant main effect of curiosity upon academic achievement in Social science of IX standard students of Tumkur Educational District- south. But there was no main effect of Gender and no interaction effect of Curiosity and Gender upon academic achievement in Social science of IX standard students of Tumkur Educational District- south.

ANOVA for types of school and gender reveals that there was no significant main effect of neither types of school nor gender upon academic achievement in Social science but there exist interaction effect of types of school and gender upon academic achievement in Social science of IX standard students of Tumkur Educational District- south.

EDUCATIONAL IMPLICATIONS:

Based on the above findings and conclusions the educational implications are presented below.

There is a saying, "it's the journey, not the destination". When it comes to curiosity, it's the question, not the answer, that engage students. The destination has value and will reward a student's hard work. The journey, however, makes that end result more exiting and motivates a learner to keep going, no matter how rocky the path. As per the findings of the study, the students with high curiosity possess better academic achievement in social science. In order to develop curiosity, the teacher has to adopt the following techniques:-

- Teach the children to question when they read rather than just reproducing the answer.
- Provide them the books of which they are interested, to quench their thirst and curiosity.
- Don't overload the minds of students with information to avoid inattention and disinterest towards learning.
- Ask open-ended questions.
- The teacher should not make his lessons boring. He should not repeat the same thing unduly. Develop interest in social science by adding the factor of variety and novelty in approach.
- The teacher should make adequate use of audio-visual aids. These aids develops curiosity and catch the attention of the students and create interest in them.
- Take the students to the field visit to provide direct experience to them, there by provide an opportunity for the enrichment of curiosity.
- Begin the presentation with the problematic situation.
- Narrate the historical events by asking the students to guess the end of it and then ask the students to substantiate their response. Finally give the true end of the event.
- Allow students to compare the past event in history with the present.
- Develop the habit of collecting pictures, figures, coins, maps, fossils, etc..
- Organize quiz, debate, essay or speech competitions on historical events.
- Show films and movies related to history and civics.
- Ask the students to write an article or enact a historical role/ event to think about it all possible ways.

DELIMITATIONS OF THE STUDY:

The present study has certain limitations which may be stated as follows:

1. The study confines only to the sample drawn from Tumkur Educational District-south.
2. The study was restricted only to the IX standard students of Tumkur Educational District.
3. The sample was limited to only 600 students.
4. The sample was selected only from the schools following state government syllabus.
5. Academic achievement alone was taken as dependent variable.

6. Academic achievement in social science alone was considered for the study.

7. Curiosity is the only independent variables of the study.

8. Only types of school and gender were taken as moderator variables.

9. The researcher has analysed the data only by adopting the statistical techniques like Pearson's product moment correlation, t-test and ANOVA.

SUGGESTIONS FOR FURTHER STUDY:

In view of the delimitations, the following suggestions were offered for the further study.

1. The study may also be extended to the students studying in the schools having central syllabus.
2. The effect of certain other variables such as birth ordinal position of the students, their parents educational level, socio-economic status, the locality (urban or rural), their emotional maturity which are also highly influential in the areas of academic achievement can also be considered to arrive at more conclusive findings..
3. Other statistical techniques like factor analysis, regression, path analysis may be adopted for further research.